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Flake-like α -alumina particles having an average major diameter of 0.5 to 25 μm and an aspect ratio, expressed by particle major diameter/average thickness, of greater than 50 to 2000 and having a thin flat form. The flake-like α -alumina particles are produced by a hydrothermal synthesis process of an aqueous slurry in which the slurry comprises an alumina hydrate and/or an alumina gel, having a particle size of not more than 2 μm and a maximum size of not more than 5.0 μm and phosphoric acid ions in an amount of 1.0×10^{-3} to 1.0×10^{-1} mol per mol of the alumina hydrate and/or alumina gel. The flake-like α -alumina particles exhibit good dispersibility when being kneaded as fillers or pigments in rubbers or plastics or as coating agents with a resin and also can be easily dispersed as primary particles in aqueous solvent with high dispersion stability when added to an aqueous slurry of precision abrasives or cosmetics. The particles are desirable in providing cosmetics with good smoothness, tackiness to the skin and spreadability.